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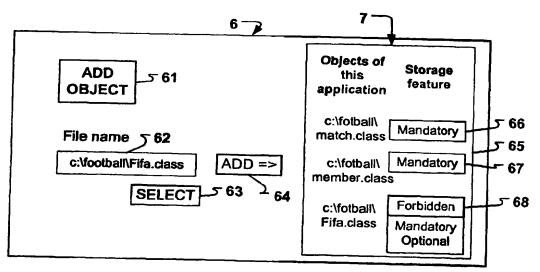
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[Continued on next page]

(54) Title: METHOD OF TRANSMITTING INTERACTIVE TELEVISION



(57) Abstract: A method (1) of transmitting interactive television, whereby interactive television applications are transmitted inside application-modules. These modules are transmitted in a broadcast stream. Recording systems cannot decide which modules are to be recorded. Therefore storage related information of said modules is signalled in the broadcast stream. Module identification information is implemented in the Application Information Table (AIT) and/or in the Download Information Indication (DII) message. Thus information is included in the broadcast stream concerning categories stating whether application modules are mandatory, optional or forbidden to record. Alternatively properties of a module are chosen from Code/Data/Both and/or Fixed/Variable. Recording systems use this information do decide if application modules are to be recorded or disregarded. Alternatively, application module identification information is transmitted in said broadcast stream. A module identification number is used to avoid multiple recordings. Application modules having the same category are preferably grouped together.

VO 2004/059973 A3 |||||||||||||

WO 2004/059973 A3



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Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal

| C. DOCUM | ENTS CONSIDERED TO BE RELEVANT | |
|------------|---|-----------------------|
| Category ° | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| X | WO 01/33852 A (OPENTV CORP) 10 May 2001 (2001-05-10) | 1-4,7, 10, |
| Y | page 2, line 34 - line 36 page 3, line 5 - line 6 page 4, line 26 - line 35 page 5, line 12 - line 28 page 6, line 38 - page 7, line 5 page 7, line 24 - line 25 | 14-18,20 5 |
| Υ | PERROT P: "DVB-HTML? an optional declarative language within MHP 1.1" September 2001 (2001-09), EBU REVIEW TECHNICAL, EUROPEAN BROADCASTING UNION, GENEVA, CH, PAGE(S) 1-16, XP002281055 ISSN: 1018-7391 page 11, paragraph 5.4 | 5 |

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|---|---|--|--|--|--|--|
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| Date of the actual completion of the international search | Date of mailing of the international search report | | | | | |
| 9 July 2004 | 19/07/2004 | | | | | |
| Name and mailing address of the ISA | Authorized officer | | | | | |
| European Patent Office, P.B. 5818 Patentiaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo ni, Fax: (+31-70) 340-3016 | Sindic, G | | | | | |



PCT/IB 03/05789

| C.(Continue | ation) DOCUMENTS CONSIDERED TO BE RELEVANT | PC1/18 03/05/89 | | |
|-------------|--|-----------------|-----------------------|--|
| Category ° | Citation of document, with indication, where appropriate, of the relevant passages | | I malayan a sa sa sa | |
| 3-11 | and the relevant passages | | Relevant to claim No. | |
| X | WO 02/01866 A (NDS LTD; BASTABLE IAN (GB); WACHTFOGEL REUVEN (IL); COHEN EINAT (IL);) 3 January 2002 (2002-01-03) page 36, line 17 - line 23 | | 1 | |
| A | WO 01/33847 A (OPENTV CORP) 10 May 2001 (2001-05-10) page 4, line 16 - line 20 page 4, line 36 - page 5, line 6 page 8, line 3 - line 7 | | 1-20 | |
| A | EP 1 107 600 A (SONY SERVICE CT EUROP N V) 13 June 2001 (2001-06-13) paragraph '0003! paragraph '0006! - paragraph '0011! | | 1–20 | |
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Information on patent family members

International Application No PCT/IB 03/05789

| Detent les | | T | | | | 00, 00, 00 |
|--|-----|------------------|----------|-------------------------|----------|------------------|
| Patent document cited in search report | | Publication date | | Patent family member(s) | | Publication date |
| WO 0133852 | Α | 10-05-2001 | AT | 254822 | T | 15-12-2003 |
| | | | AU | 770163 | | 12-02-2004 |
| | | | AU | 1252701 | | 14-05-2001 |
| | | | BR | 0015152 | | 16-07-2002 |
| | | | CA | 2388789 | | 10-05-2001 |
| | | | CN | 1382344 | | 27-11-2002 |
| | | | DE | 60006708 | | 24-12-2003 |
| | | | DK | 1224806 | | 16-02-2004 |
| | | | EP | 1224806 | | 24-07-2002 |
| | | | JP | 2003513559 | T | 08-04-2003 |
| | | | WO | 0133852 | | 10-05-2001 |
| | | | US | 2003208771 | A1 | 06-11-2003 |
| | | | | | | |
| WO 0201866 | A · | 03-01-2002 | ΑU | 6630301 | Α | 08-01-2002 |
| | | | EΡ | 1297695 | A2 | 02-04-2003 |
| | | | WO | 0201866 | | 03-01-2002 |
| | | | US | 2003163832 | A1 | 28-08-2003 |
| WO 0133847 | A | 10-05-2001 | | | | |
| WO 0133647 | A | 10-05-2001 | AT | 243401 | | 15-07-2003 |
| | | | AU | 770707 | | 26-02-2004 |
| | | • | AU | 1252601 | A | 14-05-2001 |
| , | | | BR | 0015101 | A | 16-07-2002 |
| | | | CA | 2388783 | | 10-05-2001 |
| | | | CN | 1387727 | | 25-12-2002 |
| | | | DE DE | 60003455 | | 24-07-2003 |
| | | | DK | | T2 | 06-05-2004 |
| | | | EP | | T3 | 13-10-2003 |
| | | | ES | 1234446 | | 28-08-2002 |
| | | | HK | 2206319 | | 16-05-2004 |
| | | | JP | 1050791 2003513555 | • | 19-03-2004 |
| • | | | WO | | T ^ 1 | 08-04-2003 |
| | | | WU | 0133847 | 41 | 10-05-2001 |
| EP 1107600 | Α | 13-06-2001 | GB | 2357922 | A | 04-07-2001 |
| | | | ĒΡ | 1107600 | A 1 | 13-06-2001 |
| | | | ĴΡ | 2001245272 | <u></u> | 07-09-2001 |
| | | | US | 2003191815 | A1 | 09-10-2003 |
| | | | | | | |